

**CLAIMS**

**1. PROCESS TO APPLY DIGITAL IMAGES IN STRAPS, APPLIANCE TO THIS APPLICATION AND OBTAINED STRAPS**, characterized by a process where straps (1) are manufactured with an ordinary weave (2) or with an special weave, able to receive a bleaching treatment with an optical white and a thermo-fixation process, creating an alteration at the material properties, and, after duly treated, the straps (1) are wound in reels of specific sizes to allow the images previously printed in paper to be continuously transferred to them with digital quality, said straps being cut in a cutting equipment (4), being that the paper reel (3) is assembled at said equipment inlet site (5), said paper reel being unwound over a flat table (6), upon which, is provided a mobile cutting head (7) doted with a series of vertical knives (8) and optical sensors (9) at one of its ends, said optical sensors (9) identifying a printed line (10) on the paper of an specific color, in a way that the referred optical sensors (9) are connected to a computer central (11), which coordinates the displacement of the cutting head (7), being able to displace it to any positioning or placement variation of said line (10), obeying a preset safety margin at each one of its sides forming the paper reels (12 and 12'), which are placed at the printing machine (13) along with the reel of synthetic material (14) straps, being that straps (1) printing stage, which can be applied on both sides/faces of the straps during one single operation, for such operation, at the said inlet site (15) of the printing machine (13) it is provided with an alignment device (16), which has an specific shape to enable the passage of the papers (12 and 12') and the straps (1), aligning the same and leading them to the inside of the printing

machine (13), where two calander cylinders (17) one for each side of the straps (1), are provided in a way for presenting drawings perfectly symmetrical on both sides/faces and, for that, between the cylinders (17) it is provided an element to keep the temperature steady (18) that keeps the straps (1) temperature along its passage from one cylinder to the other, maximizing the printing procedure and preventing the straps (1) from shrinking, and at the back side of the referred machine (13), the papers (12 and 12') already used are once again wound into reels (19 and 19'), which shall be discarded and the straps (1), already printed on both sides/faces is duly wound into another reel (20) which is duly cut in the desired length by an ultrasound cutting machine (21), forming small reels (22).

**2. PROCESS TO APPLY DIGITAL IMAGES IN STRAPS, APPLIANCE TO THIS APPLICATION AND OBTAINED STRAPS**, according claim 1, characterized by a cutting equipment where said cutting equipment (4), with an inlet site (5), having a flat table (6), on which a cutting head (7) is provided, that is laterally mobile, doted with a series of vertical knives (8) and, at one of its ends, a pair of optical sensors (9) are duly connected to a computer central (11) which coordinates said head (7).

**3. PROCESS TO APPLY DIGITAL IMAGES IN STRAPS, APPLIANCE TO THIS APPLICATION AND OBTAINED STRAPS**, according claim 1, characterized by a printing machine where said printing machine (13) is doted with an inlet site (15) for assembling the reels, where the alignment device (16) that leads into the inside of said machine, where two calander cylinders (17) are provided and, between such cylinders it is provided an element to keep the temperature steady (18), being doted with

stretchers and leading devices which leads to the outlet site where other reels are wound with the printed material.

5       **4. PROCESS TO APPLY DIGITAL IMAGES IN STRAPS, APPLIANCE TO THIS APPLICATION AND OBTAINED STRAPS**, according claim 1, characterized by an ultrasound cutting machine where said ultrasound cutting machine (21) cuts the reels (20) in their lengths, according to the application given to the resulting small  
10       reels (22) of straps (1).

**5. PROCESS TO APPLY DIGITAL IMAGES IN STRAPS, APPLIANCE TO THIS APPLICATION AND OBTAINED STRAPS**, according claim 1, characterized by a process of obtaining straps, where said process of obtaining said  
15       straps (1) is achieved by the manufacture of straps (1) with an ordinary weave (2) or with an special weave, printed on both faces with digital quality images, obtained in one single continuous printing process, where said straps (1) are wound into reels (20) and  
20       further cut in length forming reels (22), which sizes are dependent of their application.